Accounting and reporting for environment

A case study of TISCO

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In the era of globalisation rapid industrialisation is taking place creating an increasing pressure on environment worldover which requires an effective management for tackling the same. Unplanned industrialisation and the release of huge amount of effluents, hazardous wastes and emission of various chemicals by the industrial units in environment are the main causes of environmental damage. In fact industrial organisations are the main consumers of the resources provided by the environment. At the same time they are considered one of the main polluters of environment. So each corporate citizen should bear the moral responsibility towards the protection of environment from damages and pollution. As a matter of fact each corporate entity shall have the duty and obligation to play certain role towards the management of environment.

Objectives of the Study:

Considering the importance of environmental management in the context of sustainable development, the author in this paper intends to judge the responsibility of Indian corporate sector towards the environmental accounting and reporting as a tool of environmental management. The main objective of this study is to know how much environmental activities are disclosed by the Indian corporate sector in their published annual reports. For this purpose the author thought it fit to carry out a study in respect of iron & steel industry, as it is regarded one of the 29 categories of polluting industries by the EIA (Environment Impact Assessment) Notification of the Government of India in 1994. The Tata Iron & Steel Company Limited, a leading company among the iron & steel industry worldover, has been selected as a sample company for the purpose of this case study. However the findings of the study may not be representative for all industries specifically for iron & steel companies.

Period of Study:

The study covers a period of five years from 1995 - 1996 to 1999 - 2000.

Collection of Data:

The information and data pertaining to this study has been collected from the published Annual Reports of Tata Iron & Steel Company Ltd.

Limitation of Study:

i) The study is limited to five years only.

ii) The study is limited to a particular company belonging to the iron & steel industry.

iii) The study is based on secondary data and information collected from the published Annual Reports of the company. It was not possible to collect the primary information from the company's personnel and the nearby locality through direct interview.

Accounting for environment:

The international acceptance of the importance of environmental issues like green house effect, destruction of rain forest, acid rain, soil erosion, high level of pollution and depletion of natural resources has motivated the development of envi-

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ronmental accounting as a tool of environmental management. Environmental accounting is the treatment of various environmental issues of a firm within the financial account. It includes estimation of environmental expenditure and actual determination thereof as distinguished from normal business expenditure, recognition of environmental liabilities and disclosure of all environment activities in a separate section of the annual report of a company. Actually rapid industrialisation is taking place with the advancement of civilisation having a concern for environmental issues. As industrial organisations are the 'users' vis-a-vis 'polluters' of environment, indicated earlier on, they should account for the use of environmental resources and their pollution of the environment in the form of the effect on air, water and land. But question may arise: (i) how accounting can quantify some natural resources like fresh air, sunlight and measure their monetary value? (ii) What are the financial effects of environmental loss and loss of welfare associated with pollution? These are just a few among many quarries arising complexity of accounting for environment. Environmental accounting requires a comprehension of the business environment, impact of industrial activities on environment and determination of environmental cost and expenditure to be reflected in financial account. While normal business expenditure can easily be ascertained from the existing record of the company, the environmental cost are often rather difficult to estimate and requires specialized valuation techniques. Still there is a problem, let me present here some special kind of environmental issues and their valuation.

Cost of air pollution:

Air pollution generated from industry will cause serious health effect leading to the service potentiality of people. The cost of such pollution may be estimated by the loss of earnings due to their loss of service potentiality, direct expenses for medical care and cost of pre-matured death (in terms of P.V. of their future earnings).

Cost of sound pollution may also be calculated in the same way.

Cost of water pollution:

Surface and groundwater may be polluted from the discharge of effluents and may pose serious health hazard. If this polluted water causes health damage preventing the individuals concerned from working then its cost is equal to the opportunity cost, medical cost and cost of prematured death of effected people.

River and sea water may be polluted due to the same reasons causing reduction of fish yield and disruption of fish spawning leading to a loss of income to the fishermen. This valuation can be made by change in productivity method. Expenditure regarding cleaning up and other possible improvement of the river water quality may be taken into consideration.

Cost of ecological degradation due to deforestation:

The unwanted deforestation will lead to depletion of forest and forest land causing soil erosion and destruction of ecological balance. The cost of such degradation may be valued on the basis of contingent valuation method.

Cost of recreation:

The cost of a visit to a forest or park is equal to the amount actually incurred by people going there including travel costs, entrance fees, if any and opportunity cost of on-site and travel time etc., keeping in mind that only visiting that area is the sole reason for travel.

Cost of gifts of nature:

Nature is generally exclused from accounting. There are some natural resources (like clean air, sunlight) available to us as gifts of nature from times in memorial. These have neither any assigned value nor any market price. So it makes a problem of valuation of course. To overcome this obstracle, shadow prices could be introduced. Shadow price is used where market price does not exist. It is anything what people are willing to pay. For example, the sale value or rental value of two identical houses locating at two distinct environmental characteristics within the same geographical region may be different. The people are willing to pay more for the house at preferred environmental characteristics than the house suffering from natural calamities and environmental hazards. The price difference could be the value that people put for peace and absence of pollution.

Each valuation technique suffers from several limitations e.g., inapplicable assumptions, failure to consider externality, difficulty in extracting and separating environmental cost, lack of data base etc. Despite these shortcoming, the industry should make an attempt to measure environmental cost and benefit and reflect in financial statement as contained in annual report.

Environmental Reporting:

Disclosure of environmental activities in the annual report of a company is considered one of the most important tool of environmental management. Environmental Report is a document published and circulated by a company with the objective of having communication with its stakeholders about relevant environmental issues like use of environmental resources, pollution and other effects of the company on environment, various controlling measures to prevent pollution, company's environmental accounting, environment audit and environment management system. This report establishes a link between company and environment where both the following qualitative and quantitative aspects are taken care of.

Qualitative Information:

a) Company description alongwith main environmental issues related to Production.

b) Company's environmental policy indicating the approach towards protection of environment and the areas of failure.

c) Environment management system.

d) Compliance with the government legislation with regard to environment.

e) Company's environmental activities with the neighbouring communities for their maximum benefit.

f) Steps taken by the company for management of risk to the safety and health of employees and the local community.

Quantitative Information:

a) Company's total expenditure on protection or enhancement of environment.

b) Total stock of assets on resources related to environment.

c) Assessment of environmental costs and benefits and preparation of environmental budget.

d) Discharge of effluents by the company and its effect on air, water and land.

Case Study

In the context of foregoing discussion, it is my intention to judge the responsibility of the **Tata Iron and Steel Company Ltd.**, a token company selected for the purpose of this case study, towards the disclosure of environmental activities for environmental management as published in its Annual Report.

Tata Iron and Steel Company Ltd. - It's vision on Environment :

If one goes through the annual reports of TISCO Ltd., one can observe that the company has been disclosing its environmental information to the stakeholders since 1995-96. In this section I would like to mention the TISCO's activities towards the environmental issues as published in its annual reports with effect from the year 1995 - 1996.

1995 -1996

During this year TISCO has evolved strategies which aimed at enhancing the value of education, health and sanitation, as a part of its rural and community development programme. Considerable work has been done in this area to provide potable drinking water, extend agricultural irrigation facilities to the villages around its operational locations and to reduce pollution arising out of its operation. The company has a commitment to protect the environment and all efforts were made in this year to introduce clean technologies in all the modernisation programmes.

1996 - 1997

This year the company proved its environmental awareness through variety of programmes undertaken for rural and community development, greenery and social commitment. Starting with 32 villages in 1979, the Tata Steel Rural Development Society (specially framed) has enlarged its work base during this year to cover nearly 700 villages making rapid progress in strengthening their socio-economic future. The programme teaches people water management, re-forestation and multi crop farming in rural areas. Educational, medical and sanitation services, family planning, drinking water, irrigation, agriculture, animal husbandry, adult literacy, afforestation were, thus, thrust areas run by the society. The Tata Steel Rural Development Society which have run these programmes is widely recognised internationally and nationally, receiving twice the FICCI award for outstanding achievements in rural development. The society is also a member of the prestigious Prince of Wales Business Leaders Forum. The company under study has a Community Development and Social Welfare Department providing basic medical care, free counselling to employees and other bustee dwellers on a variety of environmental issues and conducting social awareness programmes. Hundreds of grateful men and women bear testimony to the fact that small but timely intervention by the Department has had a beneficial and positive effect. Environmental watchdogs like mobile laboratories are equiped with air. Parks, gardens, public health, water, waste treatment and disposal are taken care of and these have made Jamshedpur a model city whose pride is that it is perfectly safe to drink water out of a tap on its street. As part of landscaping development and reclamation, degraded forest lands, particularly in the mining areas, have been systematically converted into vibrant forests. Old mine shafts are blooming into beautiful botanical parks with a whole series of plants and succulents from India and abroad. The greening of the country side also helps in the rehabitation of tribal areas which receive special treatment to set up the pace of development of communities that for generations have been lagging behind. An indication of the company's social commitment is the expenditure incurred on social services of non-employees which was amounted to 342 million in 1996-97.

1997 - 1998

This year the company planted more than six lakhs trees under Green Millennium Campaign and the company proposed in its environment programme to plant one million trees by 1999 the millennium year. Besides greening, the company launched several Environmental Management Programme like Slum Development, participating the life cycle analysis project sponsored by the Ministry of Environment, introducing first benchmarking project to improve the operating performance of coke ovens effluent treatment. Jamshedpur's Began Area, consisting of 42 bustees housing over a lakh of people, has seen a social welfare programme of various projects for the benefit of the bustee people. These include roads, drains, street lights, water supply, parks and conservancy services.

Apart from these specific areas of activities, social welfare in Jamshedpur has included new facilities in the Medical Division .like the inauguration of "Jeevan Jyoti" clinics to give relief to terminally ill and depressed patients, a special "Family Life and Value Education" programme has been initiated in this year. Through enhanced Municipal Community and Medical Services, through Tata Steel's relief development programmes, the company has spent around Rs. 34 crores against the heading "Welfare Expenditure". Tata Steel thus continues to walk along the path laid down by its chairman who had said "We shoulder community responsibility as part of the social responsibility of our nation social responsibility is one of the criteria of gauging the performance of companies".

1998 - 1999

The company continued Green Millennium Programme by planting trees with a target of achieving more than one million plantation with in the coming year 1999. Tata Steel has taken on social responsibility not only at the community level but also at the national level. The company embarked on an AIDS awareness programme during this year. The company continued its exemplary record in corporate citizenship. In recognition of this contribution, the company received several awards during the year, the important ones being outstanding corporate citizen by Economic Times, Corporate Social Responsiveness by Business World and outsanding initiatives for Rural Development by FICCI.

1999 - 2000

The Company's three-year Green Millennium Project, to plant 1.5 million trees was successfully completed in December 1999. Thousands of saplings also have been planted around the new cold Rolling Mill Complex to protect it from dust, heat and pollution. Recognizing that the needs of its urban community in and around Jamshedpur are diverse from those in the rural areas, the company provided vocational training, and formal education to many children from economically backward familites, free health check-up to the people from the economically challenged sections through its two mobile medical units.

Having achieved the environmental compliance with regard to statutory norms, the company has embarked upon tackling the global issues for overall sustainable growth of the steel industry. These include reduction of energy consumption in the steel works to an all-time low of 7.8 Gcal/tcs by increase in by-product energy utilisation, closure of smaller units, automation etc; resource conservation measures, reduction of solid waste generation; solid waste utilisation by using nearly 70% of solid waste utilisation and introduction of new technology to make some of the older units comply with environmental norms. The company incurred a capital expenditure of Rs. 25 crores during the year on pollution control systems. Besides, an operating expenditure of more than Rs. 100 per tonne of crude steel is incurred on operation and maintenance of environment control systems. The rural community has been greatly benefited by Tata Steel's income generation efforts. Rural life styles have been further enhanced by empowerment of women and youth through training and education.

Over the years, Tata Steel has metamorphosed from a mere 'giver' to a 'participator' and 'facilitator' to assist rural India in effecting an improvement in its quality of life. In its capacity as a responsible corporate citizen, Tata Steel has always played an active role in times of national crises. Its activities encompass providing local services for health and hygiene, family care, sports, social forestry, woman empowerment etc. while also undertaking massive relief work for a war struck Kargil, a flooded Orissa or an earthquake torn Jabalpur. Through its dedicated and consistent social effort, Tata Steel strives to make a difference to people's lives.

Findings of the Study:

From the above discussion it is seen that during the period of study Tata Steel has launched a number of Environment Management Programme in different ways to protect the environment from pollution which have been clearly disclosed in its Annual Reports. So the objective of this paper: with regard to disclosure of environmental information to the stakeholders has been fulfilled. The company spend huge amount of expenditure for prevention of pollution and protection of environment. Thus the company under study proved its sincerity as a responsible corporate citizen.

But it was not found in its financial statement even in the explanatory schedule throughout the period covered our study to segregate the expenditure incurred by the company for various environmental activities under the head "Environmental Cost and Expenditure". Also there was no mark of indication of environment related contingent liabilities as a footnote in the Balance Sheet of the company.

Conclusion & Suggestion:

Most of the companies in India are not still aware of environmental issues and found proper place in the Directors' Report for providing environmental information to their stakeholders as there is no compulsion for it. But I am sure that this type of reporting by TISCO Ltd. will influence other corporate bodies to follow and incorporate such type of reporting in their annual reports. Like Tata Steel, some leading companies started disclosing environmental information in their annual reports on voluntary basis. The Government of India should introduce and enact a new piece of company law for disclosing the environmental information mandatory. At the same time, 'award for best presentation' for disclosing environmental information in the annual accounts may also be introduced by the confederation of Indian Industries or by a regulatory authority[1] and that will create some form of incentives.

To conclude the author beg to suggest that the company should disclose both the positive and negative impact of their activities on environment. Industry which is more responsible for environmental degradation should be more environmental friendly. The industry should take a proper environmental policy and set aside a part of their funds for environmental promotion. It should abide by various laws and regulation to prevent and control the pollution of environment. Now there is an urgent need to develop a comprehensive guideline for environmental accounting and a suitable format of environmental reporting as a device of environmental management on global basis. The author hopefully explored these crucial issues in this paper with a view to encourage the corporate personalities to bring their due attention in this area.

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